

AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) A membrane for biological applications, comprising an elastic material and at least one passage which extends through the elastic material, one of the at least one passage having an oval cross-section, and at least one cylindrical compressible space in the elastic material arranged parallel to the at least one passage, wherein an elastic, closed pore, non-permeable material is within the at least one cylindrical compressible space forming at least one hollow space in the membrane, and when said passage having the oval cross-section is expanded, which occurs when a cannula is inserted in the passage, said elastic material elastically presses against said cannula and surrounds the cannula in a seal, and wherein the membrane can be compressed perpendicularly relative to the passage into the by way of at least one compressible hollow space, said space formed by an elastic, porous but non permeable material.
2. (Canceled)
3. (Currently Amended) The membrane as set forth in claim 1, wherein the at least one cylindrical compressible space is next to the passage.
4. (Currently Amended) The membrane as set forth in claim 3, wherein the at least one cylindrical compressible space extends through the elastic material next to the passage.
5. (Currently Amended) The membrane as set forth in claim 1, wherein a number of cylindrical compressible spaces are formed in the elastic material of the membrane and are generally axially symmetrical with respect to an axis of symmetry which extends in a cross-sectional plane of the passage.

6. (Currently Amended) The membrane as set forth in claim 5, wherein the cylindrical compressible spaces are not rotationally symmetrical with respect to a longitudinal axis of the membrane which is generally perpendicular to said cross-sectional plane of the passage.

7. (Canceled)

8. (Currently Amended) A membrane for biological applications, comprising at least one passage which extends through an elastic material of said membrane, wherein when said passage is expanded, which occurs when a cannula is inserted into the passage, said material elastically presses against said cannula and surrounds the cannula in a seal, wherein the passage exhibits a cross-sectional area comprising a long main axis and a short main axis generally perpendicular to said long main axis, said long main axis and short main axis having a length greater than zero;

wherein a number of cylindrical compressible spaces formed by an elastic, ~~porous but closed pore~~, non-permeable material within the at least one cylindrical compressible space forming at least one hollow space in the membrane, and said cylindrical compressible spaces are generally adjacent to the passage and are generally axially symmetrical with respect to an axis of symmetry which extends in a cross-sectional plane of the passage; and

wherein the compressible spaces are generally axially symmetrical on both sides of the long main axis.

9. (Canceled)

10. (Previously Presented) The membrane as set forth in claim 8, wherein the oval shaped cross-section area exhibits a circumference with a constant curvature.

11. (Canceled)

12. (Currently Amended) The membrane-cannula combination as set forth in claim 17, wherein the number of ~~elastic, porous but non-permeable~~ compressible spaces are next to the passage.

13. (Currently Amended) The membrane-cannula combination as set forth in claim 12, wherein the at least one ~~elastic, porous but non permeable~~ compressible space extends through the elastic material next to the passage.

14. (Canceled)

15. (Currently Amended) The membrane-cannula combination as set forth in claim 17, wherein the ~~elastic, porous but non permeable~~ cylindrical compressible spaces are not rotationally symmetrical with respect to a longitudinal axis of the membrane.

16. (Canceled)

17. (Currently Amended) A membrane-cannula combination for biological applications, said combination comprising:

- a) a cannula for conveying a fluid;
- b) a casing;
- c) and a membrane accommodated by said casing and comprising an elastic membrane material through which a passage having an oval shaped cross-section is formed, into which said cannula can be inserted, and a number of cylindrical compressible spaces comprising an elastic, porous but closed pore, non-permeable material within the at least one cylindrical compressible space forming at least one hollow space in the membrane, the cylindrical compressible spaces are formed in the membrane that are generally axially symmetrical with respect to an axis of symmetry which extends in a cross-sectional plane of the passage;
- d) wherein when said passage is expanded by inserting the cannula through the passage of [[and]] said membrane, material presses against the ~~elastic, porous but non permeable compressible~~ spaces and said casing, generally perpendicularly relative to the passage, and elastically presses against the inserted cannula such that the membrane material surrounds the cannula in a seal; wherein
- e) the passage and the cannula exhibit different cross-sectional shapes relative to each other before the cannula is inserted.

18. (Currently Amended) A connecting device for connecting a fluid guiding means for a biological or biologically active fluid to a catheter, said connecting device comprising:

a) a casing comprising an inlet for said catheter;

b) a cannula which forms a front end of said fluid guiding means;

c) and an elastic membrane comprising a passage having an oval cross-section into which said cannula can be inserted to establish the connection, and a number of cylindrical compressible spaces comprising elastic, porous but closed pore, non-permeable material within the at least one cylindrical compressible space forming at least one hollow space in the membrane, the cylindrical compressible spaces are formed in the membrane [[that]] and are generally axially symmetrical with respect to an axis of symmetry which extends in a cross-sectional plane of the passage;

d) wherein said membrane is accommodated by said casing in such a way that a sealed connection is established between the catheter and the cannula by the membrane; wherein

e) when the cannula is inserted in the passage, the passage is expanded, and said elastic membrane elastically presses against the compressible elastic, porous but non-permeable spaces and said cannula and surrounds the cannula in a seal, wherein the membrane can be compressed perpendicularly relative to the passage.

19. (Original) The connecting device as set forth in claim 18, wherein said connecting device forms a body access device, the catheter can be implanted, and the casing is a port body which can be percutaneously or subcutaneously implanted.

20. (Original) The connecting device as set forth in claim 18, wherein a casing inlet for the catheter is formed in a recess of a casing surface and said recess exhibits a sufficient size to accommodate a curved section of the catheter.

21. (Original) The connecting device as set forth in claim 20, wherein the recess gradually tapers towards the inlet.

22. (Currently Amended) A connecting device for connecting a fluid guiding means for a biological or biologically active fluid to a catheter, said connecting device comprising:

- a) a casing comprising an inlet for said catheter;
- b) a cannula which forms a front end of said fluid guiding means; an
- c) an elastic membrane comprising a passage having an oval cross-section into which said cannula can be inserted, to establish the connection; wherein
 - d) said membrane is accommodated by said casing in such a way that a sealed connection is established between the catheter and the cannula by the membrane, and wherein the cross-sectional area of the passage comprises a long main axis and a short main axis generally perpendicular to said long main axis;
 - e) wherein a number of cylindrical compressible spaces comprising elastic, closed pore ~~not penetrable by the cannula~~ are formed from ~~porous~~ but non-permeable spaces in the elastic material within the at least one cylindrical compressible space forming at least one hollow space in the membrane, the cylindrical compressible spaces of the membrane and are generally axially symmetrical with respect to an axis of symmetry which extends in a cross-sectional plane of the passage; and
 - f) wherein the cylindrical compressible spaces ~~porous~~ but non-permeable spaces are generally axially symmetrical on both sides of the long main axis.

23. (Original) The connecting device as set forth in claim 22, wherein said connecting device forms a body access device, the catheter can be implanted, and the casing is a port body which can be percutaneously or subcutaneously implanted.

24. (Original) The connecting device as set forth in claim 22, wherein the casing inlet for the catheter is formed in a recess of a casing surface and said recess exhibits a sufficient size to accommodate a curved section of the catheter.

25. (Original) The connecting device as set forth in claim 24, wherein the recess gradually tapers towards the inlet.

26. (Currently Amended) A membrane having at least a non-porous portion that is elastic, a passage having an oval cross-section associated with the non-porous elastic portion, wherein when a cannula is inserted in the passage, the passage is expanded and the portion sealingly presses against the cannula, wherein the membrane comprises a porous portion surrounding the non-porous portion, said porous portion of the membrane comprising a plurality of spaces that are elastic, closed pore porous, and non-permeable spaces, wherein when the cannula is inserted in the passage, the porous portion is compressed by the cannula and the expanded passage-but not penetrable by the cannula are formed in the elastic portion and are arranged at least on one side of the passage and on an opposite side of the passage.

27. (Currently Amended) The membrane according to claim 26, wherein the non-porous portion can be compressed at an angle relative to the passage.

28. (Previously Presented) The membrane according to claim 27, wherein the passage having the oval cross-section exhibits a cross-sectional area having a long main axis and a short main axis perpendicular to the long main axis.

29. (Original) The membrane according to claim 27, further comprising a cannula for biological and medical uses.

30 (Original) The membrane according to claim 27, further comprising a connecting device for connecting a fluid guide and a catheter.

31. (Original) The membrane according to claim 28, further comprising a cannula for biological and medical uses.

32. (Original) The membrane according to claim 28, further comprising a connecting device for connecting a fluid guide and a catheter.

33. (Canceled)

34. (Canceled)

35. (Canceled)

36. (Currently Amended) A connecting device for connecting a fluid guiding means for a biological or biologically active fluid to a catheter, said connecting device comprising:

- a) a casing comprising an inlet for said catheter;
- b) a cannula which forms a front end of said fluid guiding means; and
- c) an elastic membrane comprising a non-porous portion with a passage having an oval cross-section extending through the non-porous portion, wherein said passage is configured such that into which said cannula can be inserted to establish the connection;
- d) said elastic membrane further comprising a porous portion surrounding the non-porous portion, said porous portion of the membrane comprising a plurality of elastic, porous, [[but]] non-permeable spaces, which is arranged adjacent to the passage and, the elastic, porous but non permeable spaces not penetrable by the cannula permeable to fluids;
- e) wherein said membrane is accommodated by said casing in such a way that a sealed connection is established between the catheter and the cannula by the membrane; wherein
- f) when the cannula is inserted in the passage, the passage is expanded, and said elastic membrane elastically presses against said cannula and surrounds the cannula in a seal, wherein the plurality of elastic, porous, [[but]] non-permeable spaces of the membrane can be compressed perpendicularly relative to the passage.